

SF-031503-S27

ISM-Band, RF SAW Filter
Revision 0: April 2017



- ☐ Electrical Characteristics
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 - ☐ Testing Environment
 - ☐ Frequency Characteristics
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□ Electrical Characteristics

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-40	-	+95
Storage Temperature Range	°C	-40	-	+95
Maximum DC Voltage	V	-	-	6
Maximum Input Power	dBm	-	-	10
Source Impedance (unbalanced) ⁽¹⁾	Ω	-	50	-
Load Impedance (unbalanced) ⁽¹⁾	Ω	-	50	-
Package type & size	S27			
Length x Width	-	-	3.0 x 3.0	-
Height	mm	-	-	1.4

Electrical Specification

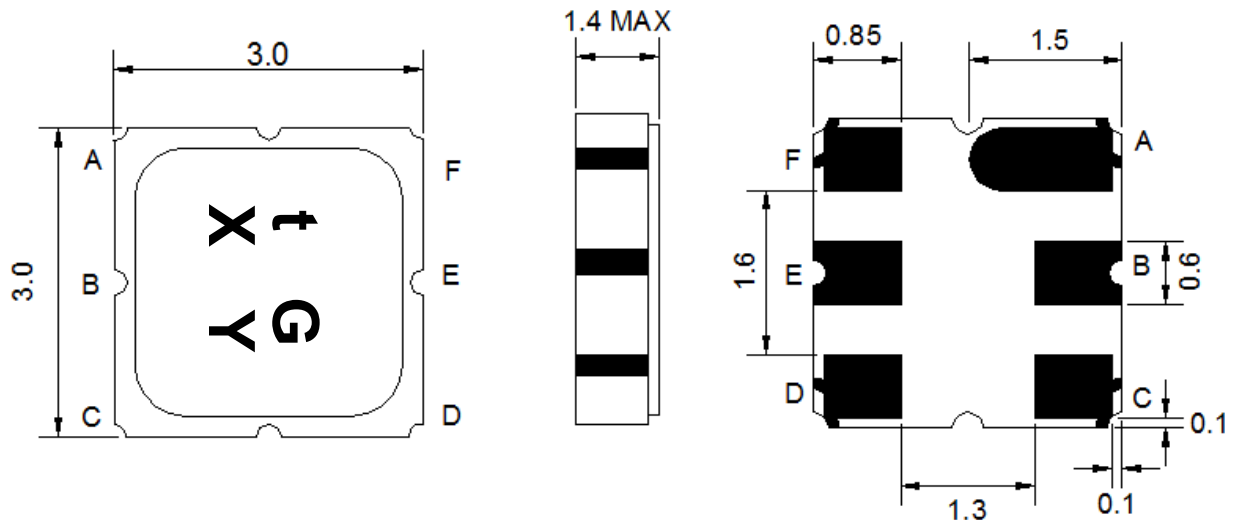
Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency Fc	MHz	-	315.0	-
3dB BW	KHz	-	560	-
Minimum Insertion Loss IL_{min}				
Incl. loss of matching elements(Q=71) *1)	dB	-	2.4	3.4
Exclude loss in matching elements *2)	dB	-	2.1	3.1
Passband (relative to IL_{min}) *1)				
314.82 ~ 315.18 MHz	-	-	1.1	3.5
Attenuation (relative to IL_{min}) *1)				
10.0 ~ 294.5 MHz	dB	42	49	-
294.5 ~ 304.5 MHz	dB	37	44	-
304.5 ~ 312.8 MHz	dB	24	31	-
312.8 ~ 313.2 MHz	dB	29	36	-
313.2 ~ 314.0 MHz	dB	20	27	-
315.9 ~ 323.0 MHz	dB	12	16	-
323.0 ~ 335.0 MHz	dB	33	39	-
335.0 ~ 600.0 MHz	dB	40	46	-
600.0 ~ 1000.0 MHz	dB	60	70	-
1000.0 ~ 2500.0 MHz	dB	50	56	-

Notes : (1)With Matching Network (Ref. Testing Environment Circuit as shown below).

*1) : The matching circuit is real by actual passive components.
 0805 Coilcraft CS series chip conductor is used for inductor.
 0402 muRata GRM series is used for capacitor.

*2) : The matching circuit is ideal by simulation.

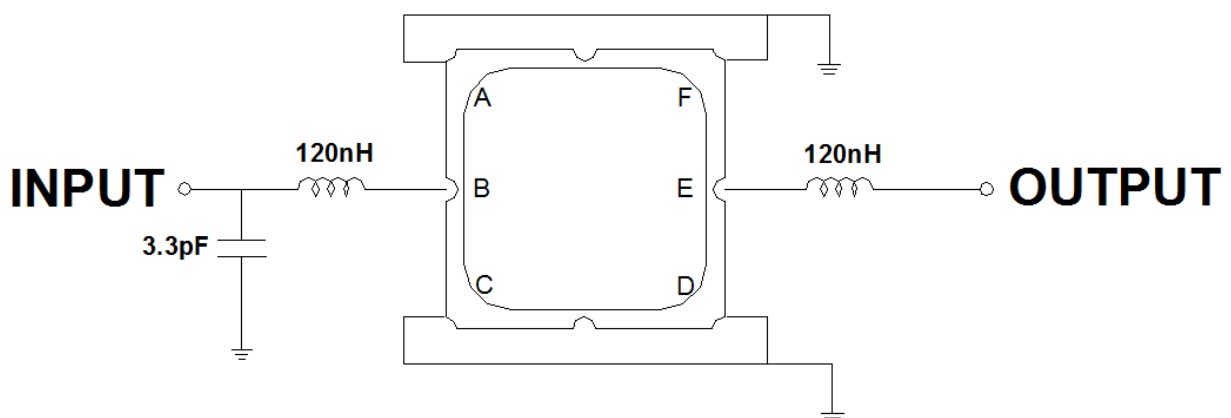
Package Dimensions



Marking Descriptions	
t	ISM-Band Application
G	Series Number
X	Date Code(Year)
Y	Date Code(Month)

Pin Description	
C,F	Ground
A	Input (recommended) or Input ground
B	Input ground (recommended) or Input
D	Output (recommended) or Output ground
E	Output ground (recommended) or Output

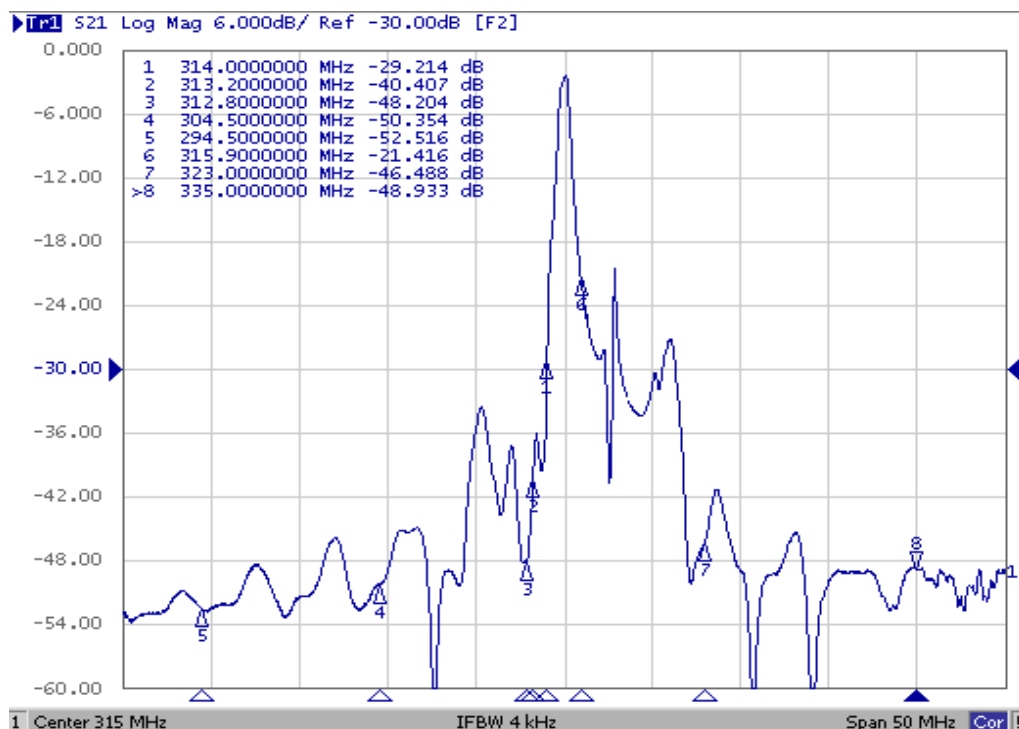
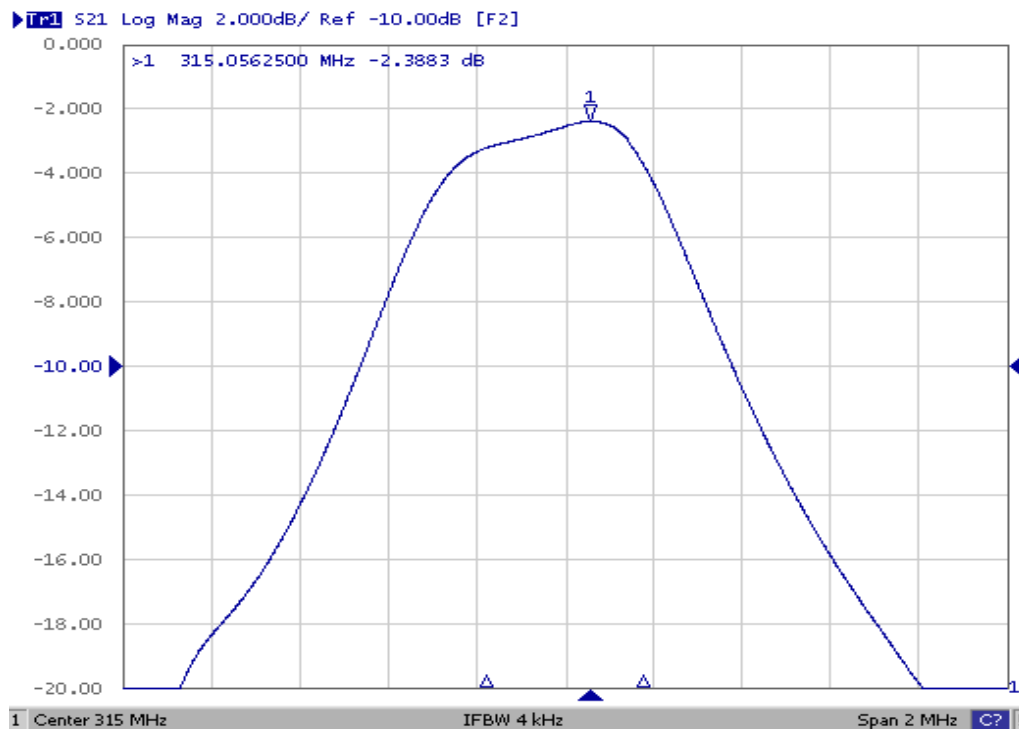
Testing Environment

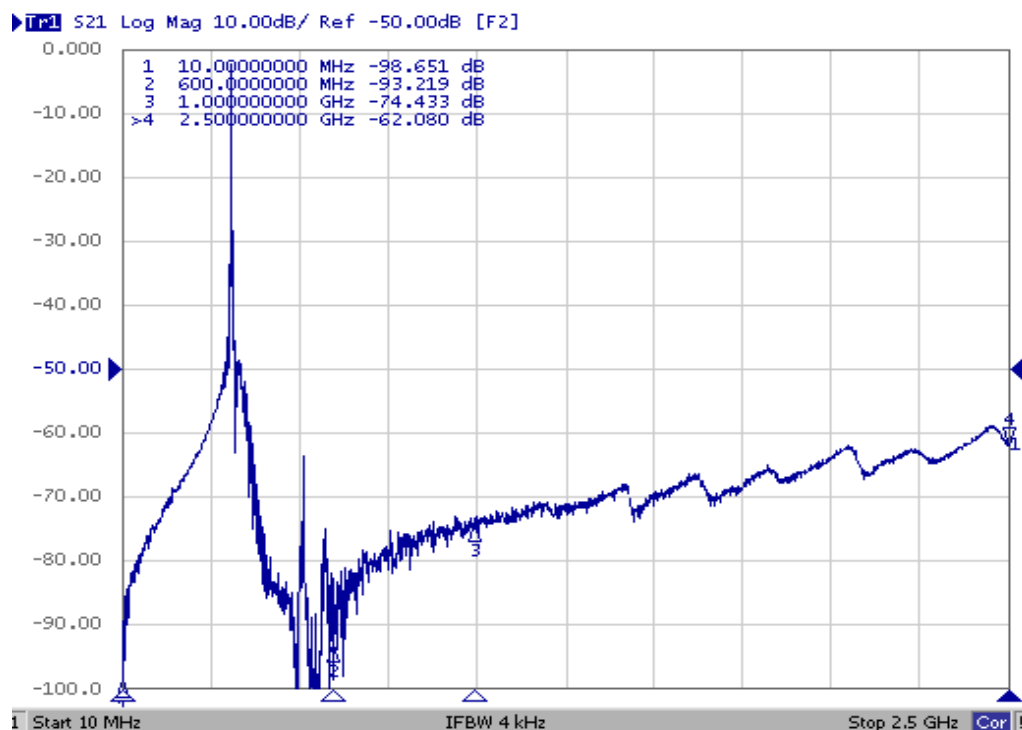


Source & Load Impedance: 50 Ω

□ Frequency Characteristics

Frequency Response

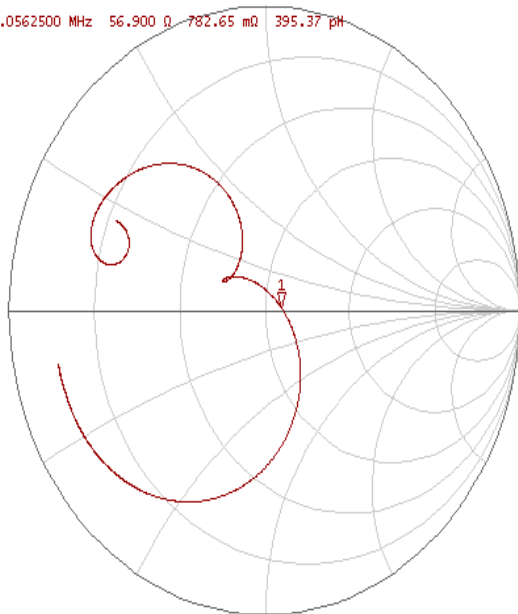




Smith chart

►Tr2 S11 Smith (R+jX) Scale 1.000U [F2]

>1 315.0562500 MHz 56.900 Ω 782.65 mΩ 395.37 pF



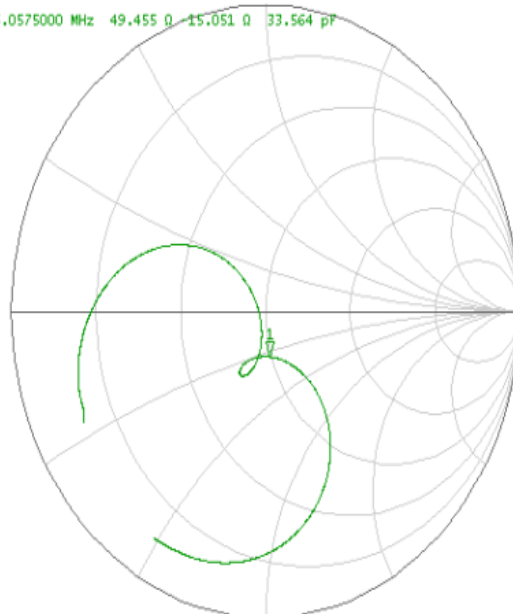
1 Center 315 MHz

IFBW 4 kHz

Span 2 MHz C2

►Tr3 S22 Smith (R+jX) Scale 1.000U [F2]

>1 315.0575000 MHz 49.455 Ω 15.051 Ω 33.564 pF



1 Center 315 MHz

IFBW 4 kHz

Span 2 MHz C2